

REMARKS

Claims 1-8 and 15-22 were previously divided out from this Application, but were not stated to be cancelled, and therefore, are stated to be cancelled in this response.

Claim 50 is cancelled. Claim 45 is amended. Claims 29-49 and 51-56 remain in the application. Reconsideration of the application in view of the amendments and the remarks to follow is requested.

Claims 45-47 stand rejected under 35 U.S.C. §102(b) as being anticipated by Kropp et al. (5,362,421). Claims 45, 48 and 49 stand rejected under 35 U.S.C. §102(b) as being anticipated by Chen et al. (4,975,221). Claims 48-49 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kropp et al. Claim 50 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Kropp et al. and further in view of Tuttle (5,558,679). Claims 46-47 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Chen et al. (4,975,221), in view of Tsukagoshi et al. (5,843,251), Kropp et al., or Inoue et al. (5,728,473). Claim 50 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Chen et al. and further in view of Tuttle '679. Claims 29, 32-36, and 51-52 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Tuttle '679 in view of Chen et al. Claims 30 and 31 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Tuttle '679 in view of Chen et al. and further in view of Tsukagoshi et al., Kropp et al., and Inoue et al. Claims 37, 40-44, and 53-56 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Tuttle ('679) in view of Chen et al and further in view of

Tuttle ('592). Claims 38 and 39 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Tuttle ('679) in view of Chen et al. And further in view of Tuttle ('592) and further in view of Tsukagoshi et al., Kropp et al. or Inoue et al.

Regarding the obviousness rejection against claim 29 based on the combination of Tuttle '679 and Chen, such claim recites a conductive adhesive mass electrically interconnecting a thin profile battery with a node location, the conductive adhesive mass comprising an epoxy terminated silane. The Examiner correctly states that Tuttle '679 is silent towards the epoxy adhesive having a terminated silane (page 6 of paper no. 10). However, the Examiner than relies on Chen to suggest that is well known and conventional to include epoxy terminated silanes in adhesives to promote adhesion (page 6 of paper no. 10). Respectfully, the Examiner is mistaken.

The Examiner is reminded, respectfully, that the Federal Circuit has continually cautioned against **myopic** focus on the obviousness of the difference between the claimed invention and the prior art rather than on the obviousness *vel non* of the claimed invention as a whole relative to the prior art as §103 requires. *Hybritech, Inc. v Monoclonal Antibodies, Inc., supra*, 231 USPQ, at 93. **In fact, the Federal Circuit has rejected the notion that “well known in the art” can support an obviousness rejection** stating that “it is irrelevant in determining obviousness that all or all other aspects of the claim may have been well known in the art.” *Jones v Hardy*, 727, F2d 1524, 1527, 1528, 220 USPQ

1021, 1024 (Fed. Cir. 1984). Pursuant to this authority, the combination of Tuttle '679 and Chen based on well known in the art is inappropriate, and therefore, the obviousness rejection based on the improper combination fails and should be withdrawn. Claim 29 is allowable.

Moreover, the obviousness rejection is based upon impermissible hindsight reconstruction using Applicant's disclosure as the roadmap for the reconstruction. Tuttle '679 is concerned with minimizing the thickness and assembly of a battery and battery contact assembly, for example, calculators, watches, organizers, etc (background). The Examiner provides the teachings of Chen to epoxy resins used as adhesives which include an adhesion promoter of terminated silane to modify the Tuttle '679 invention by using the adhesive of Chen to promote adhesion. However, there is no teaching of Tuttle '679 that adhesion between the battery and battery contact assembly is a problem. One skilled in the art with the concerns of Tuttle '679 would have no motivation to look to teachings of Chen for adhesion promotion when there are no adhesion problems of the Tuttle '679 invention. The Examiner is respectfully reminded that the motivation for combining references must be something other than hindsight reconstruction based on using Applicant's invention as a road map for such a combination. The Federal Circuit stated it most succinctly, "[t]o imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against the teacher." *W. L. Gore & Associates, Inc. v Garlock*,

Inc., 721 F.2d 1540, 220 USPQ 303, 312-13 (Fed. Cir. 1983). See, e.g., *Interconnect Planning Corp. v. Feil*, 227 USPQ 543, 551 (Fed. Cir. 1985); (explaining that hindsight reconstruction is an improper basis for rejection of a claim). Since Tuttle '679 and the other prior art references do not provide the motivation to look to Chen to provide the adhesion promoter, the only reasonable or fair argument is that the Examiner is improperly relying on the teachings of Applicant's disclosure. Consequently, the Examiner has impermissibly used hindsight to reconstruct Applicant's invention recited in claim 29, and therefore, the obviousness rejection is inappropriate and should be withdrawn.

Moreover, without any motivation to look to teachings of Chen for adhesion promotion, the Examiner is effectively presenting what may sound like a beneficial teaching of Chen, adhesion promotion, to merely state the references are appropriately combinable. However, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. MPEP §2143.01 (8th edition) citing *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Although a prior art device "may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so". 916 F.2d at 682, 16 USPQ2d at 1432; MPEP §2143.01; See also *In re Finch*, 972 F.2d, 1260, 23 USPQ2d, 1780 (Fed. Cir. 1992). Since Tuttle '679 does not teach any need for an adhesive promoter or discuss any other deficiencies or problems addressed by Chen, there is no desirability for the combination. Accordingly, the Examiner is improperly stating that since

the references can be combined, it is obvious to do so contrary to the above authority. For this additional reason, the combination of Tuttle '679 and Chen is inappropriate and should be withdrawn. Claim 29 is allowable.

Claims 30-36 and 51-52 depend from independent claim 29, and therefore, are allowable for the reasons discussed above with respect to the independent claim, as well as for their own recited features which are not shown or taught by the art of record.

For example, regarding the obviousness rejection against claims 30-31 based on Tuttle '679 and Chen in view of Tsukagoshi, Kropp or Inoue, claim 30 recites an epoxy terminated silane comprises a glycidoxy methoxy silane. Claim 31 recites an epoxy terminated silane comprises a glycidoxypropyltrimethoxysilane. However, as correctly stated by the Examiner, Tuttle '679 and Chen are silent to the type of silane utilized as the adhesion promoter (pg. 8 of paper no. 10). To correct the deficiencies in teachings of Tuttle '679 and Chen, the Examiner relies on Tsukagoshi, Kropp or Inoue collectively to state glycidoxy methoxy silane are well known and conventional adhesion coupling agents, and therefore, it is obvious to use such allegedly well known silane adhesion promoters (as recited in claims 30-31) in the epoxy adhesive of Tuttle '679 and Chen (pgs. 8-9 of paper no. 10). That is, the Examiner is effectively stating that the substitution of Tuttle '679 and Chen's silane with those of Tsukagoshi, Kropp or Inoue would be an appropriate obvious modification, without providing any motivational rationale for modifying the Tuttle '679 and Chen inventions. A substitution of teachings is completely devoid of any requisite motivational rationale.

The Examiner is respectfully reminded that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. MPEP §2143.01 (8th edition) *citing In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). “Preferably the Examiner’s explanation should be such that it provides that impetus necessary to cause one skilled in the art to combine the teachings of the references to make the proposed modification.” *Ex Parte Levengood*, 28 USPQ2d, 1300, 1301, Footnote 2, (Bd. Pat. App. and Inter. 1993) (citations omitted). The Examiner has not provided the necessary motivational rationale or impetus for substituting the silanes recited in claims 30-31 for the silane of Tuttle '679 and Chen. Therefore, the obviousness rejection lacks the requisite motivational rationale, and therefore, fails, and should be withdrawn.

Moreover, as stated previously, the Federal Circuit has rejected the notion that “well known in the art” can support an obviousness rejection. *Jones v Hardy*, 727, F2d 1524, 1527, 1528, 220 USPQ 1021, 1024 (Fed. Cir. 1984). Pursuant to this authority, well known in the art is an inappropriate rationale for modifying the art, and therefore, the obviousness rejection based on the improper rationale fails and should be withdrawn.

Additionally, since there is no motivational rationale presented for modifying Tuttle '679 and Chen, the Examiner is effectively stating the references are

appropriately combinable because they can be. However, as stated previously, the Federal Circuit has stated that the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. For this additional reason, the obviousness rejection against claims 30-31 is inappropriate and should be withdrawn.

Regarding the obviousness rejection against dependent claim 36 based on Tuttle '679 and Chen, such claim recites a substrate comprises conductive printed thick film ink over which a conductive adhesive mass is received. Chen does not teach conductive printed thick film ink and the Examiner states Tuttle '679 teaches conductive traces, and correctly states Tuttle '679 is silent toward conductive ink (pg. 7 of paper no. 10). To address the deficiency in teachings, the Examiner states that it is well known and conventional to use conductive ink as traces and that it would be obvious to do so in the apparatus of Tuttle '679 (pg. 7 of paper no. 10). Respectfully, the Examiner is mistaken on several levels. First, as stated previously, the Federal Circuit has rejected the notion that "well known in the art" can support an obviousness rejection. Pursuant to this authority, well known in the art is an inappropriate rationale for modifying the art, and therefore, the obviousness rejection based on the improper rationale fails and should be withdrawn. Claim 36 is allowable

Secondly, the obviousness rejection against claim 36 is devoid of the requisite motivational rationale. The Examiner has not provided the necessary motivational rationale for modifying Tuttle '679 to include conductive printed thick

film ink as recited in claim 36. Therefore, the obviousness rejection lacks the requisite motivational rationale. Consequently, the obviousness rejection fails and should be withdrawn.

Thirdly, since there is no motivational rationale presented for modifying Tuttle '679, the Examiner is effectively stating the references are appropriately combinable because they can be. However, as stated previously, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. For this additional reason, the obviousness rejection against claim 36 is inappropriate and should be withdrawn.

Regarding the obviousness rejection against dependent claims 51-52, claim 51 recites a node location has an interconnecting resistance of less than or equal to about 0.32 ohm-cm². Claim 52 recites a node location has an interconnecting resistance of less than or equal to about 0.16 ohm-cm². Rejecting these claims, the Examiner correctly states Chen and Tuttle '679 do not teach these limitations (pg. 7 of paper no. 10). The Examiner then improperly relies extensively on the teachings from Applicant's specification to state Applicant teaches an effective concentration of silane in the epoxy terminated silane of less than 2% by weight to obtain a desired contact resistance through the metal surface (pg. 7 of paper no. 10). The Examiner then reasons that since Chen teaches providing an epoxy functional silane of less than 1% by weight (actually teaches 0-2 parts by weight, col. 4, ln. 20), one skilled in the art would readily appreciate that Chen's teachings being within the effective concentration range

taught by th Applicant, and it would be expected that the adhesive of Chen to have the contact resistance as recited in claims 51-52 (pgs. 7-8 of paper no. 10). This reasoning for the obviousness rejection fails on several fronts.

First, the Examiner breaks a long held and basic tenet of Patent law stated generally as the Examiner can not rely on the Applicant's disclosure for teachings to provide a rejection, and such is sometimes referred to as impermissible hindsight reconstruction. The Federal Circuit stated it most succinctly, "[t]o imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against the teacher." *W. L. Gore & Associates, Inc. v Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303, 312-13 (Fed. Cir. 1983). The Examiner presents no reference or references of record for teachings to suggest the range of interconnecting resistance as recited in claims 51-52, except for relying on teachings of Applicant's disclosure. Pursuant to the Federal Circuit authority above, such reliance is hindsight, and therefore, the Examiner's rationale for the obviousness rejection against claims 51-52 must fail and should be withdrawn.

The M.P.E.P. defines the problem clearly at §2142 (8th ed):

To reach a proper determination under 35 U.S.C. §103, the Examiner must step backward in time and into the shoes worn by the hypothetical 'person of ordinary skill in the art' when the invention was unknown and just before it was made. In view of all the factual information, the Examiner must then make a determination whether the claimed invention 'as a whole' would have

been obvious at that time to that person. **Knowledge of Applicant's disclosure must be put aside in reaching this determination**, yet kept in mind in order to determine the 'differences', conduct a search and evaluate the 'subject matter as a whole' of the invention. The tendency to resort to 'hindsight' based upon the Applicant's disclosure is often difficult to avoid due to the very nature of the examination process. However, **impermissible hindsight must be avoided** and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.

M.P.E.P. §2143 (8th Ed.) (emphasis added). No reasonable or fair argument can be made that the Examiner has not relied on the knowledge of Applicant's disclosure. Consequently, the Examiner has impermissibly used hindsight to reconstruct Applicant's invention recited in claims 51-52, and therefore, the obviousness rejection is inappropriate and must be withdrawn.

Additionally, the Examiner relies on Chen's teaching of providing an adhesion promoter having 0-2 parts by weight (pg. 7 of paper no. 10) to allegedly teach limitations of claims 51-52. Such claims do not recite an adhesion promoter having any parts by weight, and therefore, such teachings of Chen are not relevant to teachings of the limitations of claims 51-52. For this reason the rejection is improper and should be withdrawn. Claims 51-52 are allowable.

Regarding the obviousness rejection against independent claim 37 based on Tuttle '679, Chen and Tuttle '592, the Examiner uses the same rationale to combine Tuttle '679 and Chen as was presented against independent claim 29. Consequently, for all the reasons presented with respect to claim 29, the

combination of Tuttle '679 and Chen is inappropriate and fails. For this reason, the combination of Tuttle '679, Chen and Tuttle '592 fails and should be withdrawn.

Claims 38-44 and 53-56 depend from independent claim 37, and therefore, are allowable for the reasons discussed above with respect to the independent claim, as well as for their own recited features which are not shown or taught by the art of record.

Regarding claim 45, such claim is amended to include the limitations of claim 50. As amended, the claim stands rejected by two obviousness rejections, Kropp and Tuttle '679, and Chen and Tuttle '679. As amended, the claim recites at least one of first and second electric components comprises a nickel containing metal surface over which the conductive adhesive mass is received. In the separate rejections, the Examiner relies on Kropp and Chen, respectively, to teach it is well known and conventional to electrically connect electronic components with an epoxy adhesive, and then provides Tuttle '679 for each rejection to teach the recited nickel containing metal surface (pgs. 4-5 of paper no. 10). However, once again, there is no motivational rationale presented for modifying Chen or Kropp by Tuttle '679, other than the simple fact they can be. However, as stated previously, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. Moreover, at the time of Applicant's invention, electrically connecting nickel containing metal surfaces was problematic (see background of the originally-filed application), and therefore, the

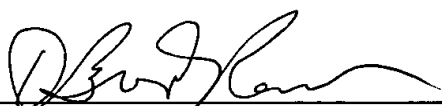
invention recited by claim 45 was not well known or conventional. The obviousness rejection against claim 45 is inappropriate and should be withdrawn.

Claims 46-49 depend from independent claim 45, and therefore, are allowable for the reasons discussed above with respect to the independent claim, as well as for their own recited features which are not shown or taught by the art of record.

This application is now believed to be in immediate condition for allowance, and action to that end is respectfully requested. If the Examiner's next anticipated action is to be anything other than a Notice of Allowance, the undersigned respectfully requests a telephone interview prior to issuance of any such subsequent action.

Respectfully submitted,

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By: 
D. Brent Kenady
Reg. No. 40,045